

What is claimed is:

1. An electric contact coupling comprising a first and a second contact carrier housing, each of which contains a first or second contact carrier for first or second contact elements which upon coupling come into electric contact with one another, characterized in that the first and the second contact carriers with respect to the coupling axis of the electric contact coupling are each formed rotationally symmetrically, that the first contact carrier is formed as a plug part with a cylindrical outer circumferential surface on which the first sliding contact elements are arranged, and that the second contact carrier is formed as a socket part intended to receive the plug part and has a cylindrical inner circumferential surface on which the second sliding contact elements are arranged.
2. An electric contact coupling according to claim 1, wherein the coupling is manually actuatable.
3. An electric contact coupling according to claim 1, wherein the coupling is automatically actuatable.
4. An electric contact coupling according to claim 3, wherein each contact carrier housing is designed for fastening to a coupling head of an automatic mechanical coupling for vehicles, especially rail vehicles.
5. An electric contact coupling according to claim 1, wherein one of the first and second contact elements have stationary contact surfaces and that the other sliding contact elements have spring contacts for engagement with the stationary contact surfaces.
6. An electric contact coupling according to claim 1, wherein one of the contact carriers is axially adjustable by means of a positioning device.

7. An electric contact coupling according to claim 6, wherein the first contact carrier is connected with the piston rod of a double acting pneumatic cylinder.
8. An electric contact coupling according to claim 6, wherein the other contact carrier is elastically axially supported and is biased in the coupling direction.
9. An electric contact coupling according to claim 1, wherein the contact carriers are rotationally securely supported in their associated contact carrier housings.
10. An electric contact coupling according to claim 1, wherein the first contact carrier on its side facing the second contact carrier has a pot shaped cylindrical recess in which plug contact elements are arranged, which plug contact elements are intended for cooperation with complementary contact elements on a second contact carrier.
11. An electric contact coupling according to claim 10, wherein the plug contact elements are formed as contact pins and that the complementary contact elements are formed as sockets.
12. An electric contact coupling according to claim 1, wherein centering surfaces are formed on the plug part and on the socket part for cooperation with one another.
13. An electric contact coupling according to claim 10, wherein centering elements are arranged in the recess of the first contact carrier.

14. An electric contact coupling according to claim 13, wherein the centering elements are formed as ribs of an electric conducting material, which ribs extend between the plug contact elements and upon coupling are received in complementary recesses in the second contact carrier.
15. An electric contact coupling according to claim 10, wherein the plug contact elements individually or in groups are surrounded by an electric screen.
16. An electric contact coupling according to claim 1, wherein the first contact carrier on its side facing away from the second contact carrier is connected with a contact carrier container which receives terminal ends of the first contact element, the bottom of which contact carrier container is connected with the piston rod of the pneumatic positioning device, which piston rod has an axially through going cable channel which enters into the contact carrier container.
17. An electric contact coupling according to claim 16, wherein a seal surface is formed on the first contact carrier or on the contact carrier container for engagement with the second contact carrier housing.
18. An electric contact coupling according to claim 1, wherein the second contact carrier is axially movably and with radial play supported in the second contact carrier housing, which second contact carrier on its outer edge facing the first contact carrier has a conical centering surface for engagement with a complementary conical abutment surface of the second contact carrier housing, and which second contact carrier is biased by spring means in the direction toward the abutment surface.
19. An electric contact coupling according to claim 1, wherein the contact carrier housings are provided with mechanical centering means which in the coupling procedure come into mating engagement with one another.

20. An electric contact coupling according to claim 19, wherein the centering means has an associated signal producer which responds to the mating engagement of the centering means.
21. An electric contact coupling according to claim 1, wherein at least one of the contact carrier housings is fastenable to its associated coupling head by an elastic fastening element.
22. An electric contact coupling according to claim 21, wherein the fastening elements are so arranged that the contact carrier housings in their coupling directions protrude slightly beyond the associated coupling head of the mechanical coupling.
23. An electric contact coupling according to claim 1, wherein coupling openings of the contact carrier housings are each closable by a controllable closure.
24. An electric contact coupling according to claim 23, wherein the closure includes at least one closure plate movable perpendicularly to the coupling axis.
25. An electric contact coupling according to claim 23, wherein the closure is controllable in dependence on the coupling procedure.
26. An electric contact coupling according to claim 1, wherein the contact carriers in the coupled condition are lockable relative to one another.
27. An electric contact coupling according to claim 1, wherein the first contact carrier is lockable with the second contact carrier housing.

28. An electric contact coupling according to claim 26, wherein a radially movable locking element is arranged on one of the parts which are lockable to each other, which locking element is intended for insertion into an associated recess in the other part.

29. An electric contact coupling according to claim 28, wherein the locking element is a pin movable by an electromagnet.

30. An electric contact coupling according to claim 26, wherein the latching takes place by means of at least one detent element.

31. An electric contact coupling according to claim 28, wherein the locking or detent element is arranged on the second contact carrier housing.

32. An electric contact coupling according to claim 28, wherein the locking or detent element is arranged on the socket part.

33. An electric contact coupling according to claim 28, wherein the locking or detent element is so formed that in the event the pulling force exceeds a given threshold value the latching of the latched together parts is released.

34. An electric contact coupling according to claim 1, wherein a sensor is provided which supervises and controls the entire insertion of the plug part into the socket part.

35. An electric contact coupling according to claim 6, wherein the movable parts of the positioning device are arranged at least substantially in the first contact carrier housing or in a housing rigidly connected with the first contact carrier housing.

36. An electric contact coupling according to claim 8, wherein the positioning device in the coupled condition is switchable to a free running position in which the first contact carrier is axially freely movable with respect to the first contact carrier housing.